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ABSTRACT

This paper discusses three schools that have started a program designed to include at-risk students in gifted and talented programming by promoting systemic changes in student identification for gifted and talented classes and differentiated instruction in the regular classroom setting. The study conducted teaching observations and analyzed surveys of students, parents, and 21 teachers in three middle schools in three Kentucky school districts to determine whether a combination of sustained school-wide professional development and in-depth training of a smaller cadre of teachers is an effective model for effecting changes in teacher behavior. The school-wide professional development program was found to be effective in providing "awareness" level instruction to teachers and sensitizing them to the needs of disadvantaged gifted students. However, the on-going training provided to a cadre of teachers seeking gifted education teaching certification was found to be key to systemic change at each of the three schools. Teachers in the buildings turned to the cadre of teachers to help them implement the practices they had learned in the professional development and to help them problem-solve when the practices did not work smoothly. (Contains 44 references.) (Author/CR)

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Differentiation of Instruction for Disadvantaged Gifted Students

A Systemic Change Model

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Abstract

Differentiation of Instruction for Disadvantaged Gifted Students:

A Systemic Change Model

It is often difficult to distinguish between truly gifted children and children whose background has been so enriched that they score extremely well on norm-referenced measures of intelligence and achievement. Students who come from economically and educationally disadvantaged families whose parents were not very successful in school themselves often do not have the opportunity to learn how to perform academically in a way that will ensure success in school and inclusion in a gifted/talented program. In order to try to not miss including at-risk students in Gifted and Talented (GT) programming, three schools have started a program designed to promote systemic changes in the way students are identified for gifted and talented classes and the way teachers teach to include differentiation of instruction in the regular classroom setting. The present study conducted teaching observations and analyzed surveys of students, parents, and teachers in three middle schools in three Kentucky school districts to determine whether a combination of sustained school-wide professional development and in-depth training of a smaller cadre of teachers is an effective model for effecting changes in teacher behavior. The school-wide professional development was found to be effective in providing "awareness" level instruction to teachers and sensitizing them to the needs of disadvantaged gifted students. However, the on-going training provided to a cadre of teachers seeking gifted education teaching certification was found to be

key to systemic change at each of the three schools. Teachers in the buildings turned to the cadre of teachers to help them implement the practices they had learned in the professional development and to help them problem-solve when the practices did not work smoothly.

A descriptive analysis of parent, student and teacher surveys and classroom observations revealed systemic changes are taking place in identification practices and differentiation of instruction.

Differentiation of Instruction for Disadvantaged Gifted Students:

A Systemic Change Model

Introduction.

In the America 2000 document (1989), developed by the President of the United States and the Governors of all 50 states, it was stated that by the year 2000:

- "...every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.
- students will be first in the world in science and mathematics achievement.

and that

- every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship."

These goals stress the need for excellence (first in the world in math and science) and the need for increasing ability to compete in economic and international technological arenas. Gifted students can only learn to use their minds well, be first in the world in science and mathematics achievement, and possess the knowledge and skills necessary to compete in a global economy if they are challenged to excel.

Separate vs. combined programs for gifted education.

The provision of services to gifted students has traditionally been along a continuum from full-time regular class placement with same age peers and no special programming to total segregation of gifted students from the mainstream student population. The two most common types of programming are pull-out and in-class

models. A pull-out model has the student enrolled in a regular classroom for most of the time. The student is pulled out to a gifted class on a daily or weekly basis. A drawback to pull-out programs is that fragmentation often occurs (Vaughn, Feldhusen, & Asher, 1991; Rogers, 1998). In-class models usually have same age students grouped by age and mixed heterogeneously for ability, relying heavily on cooperative learning group theory. Adaptations, such as differentiation of instruction, are made to the curriculum to allow the gifted students to perform alternative and sometimes additional learning activities in the regular classroom full time.

There is currently a great debate in the professional literature about which of these two models are more appropriate for the delivery of services to gifted students (Kulick, 1991; Kulick & Kulick, 1982; Kulick & Kulick, 1987; Kulick & Kulick, 1990; Lynch & Mills, 1990; Mills & Durden, 1992; Rogers, 1998; Slavin, 1987a; Slavin, 1987b; Slavin, 1988a; Slavin, 1988b; Slavin, 1990; Slavin, 1991; Slavin, Leavey, & Madden, 1984; Winner, 1998). A review of this literature seems to indicate that it is important for gifted students to have the best of both worlds. Gifted students need to be a part of a regular classroom where they are in cooperative learning groups interacting with children of all ability levels using an integrated curriculum (Slavin, ibid.). Gallagher (1991) agrees and states that cooperative learning methods are well suited to the changing needs of the American workplace and to accomplish the goals of America 2000. Differentiation of instruction is recognized as an effective method for addressing the needs of gifted students in the regular classroom. Gifted students are not just given additional work in a differentiated classroom, but are given alternative assignments according to their skill and ability that force them to engage higher order thinking skills.

Gifted students also appear to benefit from pull-out programs where they have an opportunity to be with intellectual peers and make rapid progress in specific academic skills (Kulick & Kulick, 1984.; Vaughn, et. al, 1991). The proponents of pull-out and ability grouped classes have found that it is advantageous for gifted students to have an opportunity to learn with other gifted students (Kulick, 1991; Kulick & Kulick 1987; Kulick & Kulick, 1990; Mills & Durden, 1992). Gifted students need an opportunity to be with other gifted students to develop a sense of belongingness and self-esteem (Vaughn, et. al, 1991) and need help in acknowledging that they are gifted and what this implies for them as learners (Marshall, 1998; Mills & Durden, 1992; Spicker, Southern, & Davis, 1987). They can do this by talking to other gifted students who have had similar life and school experiences, thereby beginning to feel comfortable with their giftedness.

Identification of students as gifted.

A problem with gifted education, regardless of the format of program delivery, is the identification of which students are to be selected as gifted. It is well documented that affluent white students are more likely to be enrolled in gifted programs than minority or disadvantaged children. Affluent white students consistently score higher on traditional norm-referenced tests that are often used to make gifted education placement decisions (Barstow & Baldwin, 1988). Gifted economically disadvantaged students represent an untapped potential for excellence in school systems across the nation (Maker, 1989; Patton, Prillaman, & VanTassel-Baska, 1990; Richert, 1987). There is a need to establish a method of identifying economically disadvantaged gifted students that does not penalize them due to poor performance on standardized norm-

referenced tests.

Wiggins (1989), Resnick (1990), and Renzulli and Purcell (1996) have suggested that performance-based assessments are more authentic than standardized test data. Students work alone or in small groups on real life projects that require problem solving and higher level thinking skills. Students are required to conduct original research and apply it to meaningful problems. The performance data is gathered over a period of time and represents what a student is capable of producing when performance criteria are clearly explained and taught.

Examples of performance-based assessment techniques are: portfolios of student work, writing journals, and student performance projects. Another approach to identifying economically disadvantaged gifted children is surveys. Surveys and/or interviews with parents help identify gifted students because parents are often more accurate than the schools in identifying gifted children, particularly young gifted children (Louis & Lewis, 1992). Student surveys can be effectively used to elicit peer nominations to determine who the children in the class believe to be gifted (Banbury & Wellington, 1989; Gagne, 1989).

Economically and educationally disadvantaged students often have parents who are not educationally adept. The parents have not been very successful in school themselves and do not know how to help their child learn the teacher's expectations for classroom performance. For example, many of the parents of disadvantaged students have never conducted a research project on insects and would have no idea how to help their eight year old child use the library to research the topic, conduct an experiment, and write a paper on such a project. Well-educated parents, who have

learned what is expected within the educational system, can help their child perform at high levels by teaching their child the "secrets" of educational success. Performance-based assessment, if conducted correctly, instructs all students in the criteria by which they will be judged and the standards for excellence. All students, educationally disadvantaged or enriched, then know the rules of the assessment game and have the opportunity of equal footing. Alternatives to traditional testing appear essential to identify students who do not perform well on standardized tests (Chapman, 1988; Mitchell, 1988; Richert, Alvino, & McDonnel, 1982; Skuy, Gaydon, Hoffenberg, & Fridjhon, 1990; Spicker, et. al, 1987).

It is often difficult to distinguish between truly gifted children and children whose background has been so enriched that they score extremely well on norm-referenced tests (but are actually in the bright-average range of intelligence). On the other hand, students who come from economically and educationally disadvantaged families have often never had a book read to them, have not had developmentally appropriate and enriching materials to play with, and many have never been out of the county of residence. Every year students begin school who have never seen an elevator, never eaten in a restaurant (even McDonald's), and never been to a library or zoo. These students come to school ready and eager to learn, but behind their peers in life experiences. It is often very difficult to identify the gifted children from this background. They do not come to school already knowing how to read, and typically do not do well on standardized tests (Baldwin, 1987; Gardner, 1983). This results in two possible conclusions:

1. Low socio-economic status (SES) students are not as smart as middle or

upper SES students.

2. Gifted education identification processes discriminate against economically disadvantaged students.

The first conclusion is unthinkable and not supported by research which indicates that giftedness is evenly distributed across race, gender, and ethnic groups (Eby & Smutney, 1990; Smith, Le Rose, & Clasen, 1991). Are we to believe that giftedness is not evenly distributed across socioeconomic status? The second conclusion is more palatable, but has profound implications for research and more importantly, for practice.

Most classroom teachers have not had any staff development on gifted education and grossly under-identify and under-serve gifted students. The educationally and economically disadvantaged students are rarely noticed by teachers as possibly being gifted and needing specially designed educational practices to develop their specific skills and talents. Teachers who have not received intensive staff development most often identify "teacher-pleasers" as students capable of and needing their encouragement and instruction to excel. These teacher pleasers are most often bright average children from educationally enriched backgrounds who find learning easy and are motivated to try to do well on teacher-assigned tasks. They are often not truly gifted, and students who do not meet this stereotype are often overlooked (Biehler, 1992). As a result, the disadvantaged gifted students often do not receive any gifted education services as a primary student. This often leads to non-identification at the upper grade levels because standardized tests are typically used for identification at these levels, and disadvantaged students do not typically do well on this type of test (Barstow & Baldwin, 1988; Biehler, 1992; Gardner, 1983). In order to facilitate effective

teacher referrals, teachers need to be taught to look at a range of information about individual students (Guskin, Peng, & Simon, 1992).

When one aspect of a program in the classroom is improved, there is a general overall improvement in the total school program (Olenchak & Renzulli, 1989). Karnes & Johnson (1987) found that when they improved one aspect of the Head Start program, the entire program was upgraded. They focused on identifying potentially gifted children who were provided a program which emphasized higher-level thinking. As a result, both identified gifted and non-identified students made significant gains over comparison groups who did not receive the instruction. This study has an implication for disadvantaged students who may not be formally identified, but are able to reap the benefits of an improved educational program. This will help address the inequity in educational resources which often exists between affluent and economically disadvantaged gifted students.

In summary, the America 2000 plan mandated both excellence and equity in education. The current situation of under-identification of disadvantaged students for gifted programs provides neither excellence nor equity. Eby and Smutny (1990) assert that giftedness is randomly distributed across race, gender, and ethnic groups. Therefore, identification systems must be developed to identify students representative of the disadvantaged subgroup in the proportion to their numbers in the total school population. If any students need gifted programs, disadvantaged students need them the most (Richert, et. al, 1982).

Method

Participants

Participants were: 21 regular class teachers from three middle schools in Kentucky who have received professional development training in the identification of and educational planning for gifted and talented students with special emphasis on economically disadvantaged and educationally underachieving students, students identified as gifted or talented in the three middle schools, and parents of the students identified as gifted or talented.

Materials

The surveys consist of a series of questions about the identification procedure for students for a gifted and talented program, the effects of the staff development programs that have been implemented, and perceived student benefit of the new identification and teaching practices.

Procedure

The gifted and talented education coordinator at each of the three schools was contacted to get basic demographic information about the school and to serve as the liaison to administer and return the survey instruments. For the purposes of the present research, qualification for the federal free or reduced lunch program is considered evidence of low socio-economic level. Teachers, parents and students were surveyed in the winter of 1999. Classroom observations and teacher focus groups were conducted in early spring 2000.

Results

Table 1 outlines the changes over three years in the percent of students in the school on free or reduced lunch versus the number of students identified for the gifted and talented program who qualify for free or reduced lunch. Qualification for free or reduced lunch is being used as the indicator of economic disadvantage.

	Student enrollment	% of students on free/reduced lunch			% of students in GT on free/reduced lunch			% students in GT programs		
	99/00	97/98	98/99	99/00	97/98	98/99	99/00	97/98	98/99	99/00
School 1	367	51%	57%	54%	22%	34%	30%	30%	31%	32%
School 2	368	84%	84%	84%	63%	65%	71%	7%	16%	22%
School 3	387	72%	72%	72%	35%	56%	40%	12%	17%	15%

Survey results indicated that teachers felt their ability to identify culturally diverse and low-socioeconomic gifted and talented students had improved after professional development training and activities on identification procedures. The present results are consistent with findings of other research that economically disadvantaged students are under-identified for gifted and talented programs. However, the findings of the survey indicate that teachers who have received specific training in the identification of these hard to identify populations believe they are better able to identify these students after detailed training.

To what extent have staff development activities influenced your attitudes toward identification of gifted/talented students?	Not at all 10%	Slightly 33%	Moderately 19%	Significantly 38%
To what extent have staff development activities influenced your attitudes toward identification of culturally diverse students?	Not at all 5%	Slightly 52%	Moderately 33%	Significantly 10%
To what extent have staff development activities influenced your attitudes toward identification of students from low-	Not at all 14%	Slightly 33%	Moderately 19%	Significantly 33%

socioeconomic status environments?				
The identification procedure in my school correctly identifies gifted and talented students from my class	Strongly disagree 10%	Disagree 38%	Agree 29%	Strongly agree 14%
The identification procedure in my school misidentifies gifted and talented students from my class	Strongly disagree 5%	Disagree 19%	Agree 38%	Strongly agree 19%
Culturally or educationally disadvantaged students are often not identified for the gifted and talented program?	Strongly disagree 10%	Disagree 38%	Agree 19%	Strongly agree 19%

Additionally, in response to an open question asking for an example of how their attitudes had been influenced by the professional development that has been provided, one respondent answered "... I also realize we are missing (in the identification process) disadvantaged and especially underachieving students with high potential."

Observation of instruction in classes of teachers in the endorsement program and teachers who have received professional development but who are not in the program revealed striking differences in the amount of differentiation of instruction. All of the teachers who were observed who are in the endorsement program differentiated instruction for the majority of the class period. Only one teacher who is not in the endorsement program differentiated most of her class instruction. The other non-endorsement teachers who were observed spent an average of less than 2 minutes per period differentiating instruction and two teachers did not differentiate at all.

Parents of students in the GT programs at each of the three participating middle schools were surveyed in fall 1999. The parents in this survey feel that the gifted/talented program has helped their child academically, emotionally, socially, and intellectually. Although the parents are very positive about the program, the number of participants in training meetings and Saturday Choice sessions is extremely low. All of

the parents feel that specialized school programming and/or services are needed for students who display underachievement or learning problems.

Parent Survey

Yes	No		
55%	45%	1	Do you feel your child has specific needs as a result of being gifted or talented that cannot be met through specialized programming?
8%	92%	4	If you have had other school-age children, have any of them been in a gifted/talented program?
45%	55%	7	Have you attended general informational meetings at school concerning the gifted/talented program?
100%	0%	8	Were the meetings beneficial?
8%	92%	9	Have you attended specific training meetings at school concerning the gifted/talented program?
100%	0%	10	Were the meetings beneficial?
0%	100%	11	Have you helped to provide activities for any Saturday Choice sessions?
0%	0%	13	If you participated in providing any of the Saturday Choices programs, was it a beneficial experience?
0%	100%	14	Did your child attend the Morehead State University Gifted/Talented Summer Institute this past summer?
0%	0%	15	If your child attended the MSU summer program, was it beneficial?
100%	0%	17	Does your child plan to attend college?
100%	0%	18	If you answered yes to number 17, do you think he/she will attend within the state of Kentucky?
1005	0%	19	Do you feel your child's participation in the gifted/talented program in your school has helped your child academically?
85%	15%	20	Do you feel your child's participation in the gifted/talented program in your school has helped your child emotionally?
91%	9%	21	Do you feel your child's participation in the gifted/talented program in your school has helped your child socially?
100%	0%	22	Do you feel your child's participation in the gifted/talented program in your school has helped your child grow or extend himself/herself intellectually?
0%	100%	23	Do you feel your child's participation in the gifted/talented program in your school has caused him/her any difficulty with peers who are not in the program?
75%	25%	24	Do you feel your child's "regular education" teachers stimulate and challenge you child to do his/her best work?
8%	92%	25	Are you using technology for networking with parents of other gifted/talented children in the other partner middle schools?
100%	0%	26	Do you feel specialized school programming and/or services are needed for students who display underachievement or learning problems?
100%	0%	27	Do you feel specialized school programming and/or services are needed for students who display underachievement or learning problems?

Student Survey

The majority of the students in the survey feel that their experiences in the gifted/talented program have been beneficial for them academically, socially, and intellectually. Students also feel that their participation in the program has met the needs of their particular area of giftedness. However, this project has not resulted in students participating in a mentor relationship. Over ninety percent of these students are not involved in mentorship within local high schools and local communities as a result of this project.

Student Survey

Yes	No		
87%	13%	1	Did your mother graduate from high school?
58%	42%	2	Did your mother attend college?
85%	15%	3	Did your father graduate from high school?
37%	63%	4	Did your father attend college?
97%	3%	5	Do you plan to go to college?
70%	30%	6	If yes, do you plan to attend a university in the state of Kentucky?
89%	11%	7	Do you feel your gifted/talented experiences over the year have helped you academically?
82%	18%	8	Do you feel your gifted/talented experiences over the year have helped you socially?
56%	44%	9	Do you feel your gifted/talented experiences over the year have helped you emotionally?
83%	17%	10	Do you feel your gifted/talented experiences over the last year have caused you to grow or extend yourself intellectually?
14%	86%	11	Do you feel your participation in gifted/talented experiences over the last year have caused you any difficulty with your peers who are not in the program?
30%	70%	12	Have you attended/taken part in the Saturday Choices programs?
46%	54%	13	Do you feel the Saturday Choices programs have been beneficial?
44%	56%	15	Do you plan to return or stay in your local community when you begin your career?
86%	14%	16	Do your "regular education" teachers stimulate and challenge you to do your best work?
26%	74%	17	Did you attend the Gifted Talented Summer Institute at Morehead State University this past summer?
95%	5%	18	If you did attend, was it a valuable experience?
50%	50%	22	Are/have any of your brother or sisters been in a gifted/talented program?
76%	24%	23	Do you believe that participation in a gifted/talented program has met your needs in your particular area of giftedness?
26%	74%	24	Are you using technology to meet with a mentor in an area of interest for you?

58%	42%	25	Are you establishing friendships with the students involved in this project from the other participating middle schools?
4%	96%	26	Are you involved in mentorship with any students from your local high school as a result of this project?
7%	93%	27	Are you involved in mentorship with any people from your local community as a result of this project?

School climate and level of systemic change were evaluated through discussions with building administrators and teacher focus groups. All teacher focus groups reported that the school culture was more inclusive regarding students who qualify for GT services. Teachers reported they know how to distinguish between "teacher pleasers" and truly gifted and how to identify underachieving and low income GT students who may not meet the traditional stereotype of GT students. All teachers and administrators in the focus groups reported believing the PD they had received on identification and differentiation of instruction were "best practices " and good for the entire school. They stated they felt the training had made a systemic change in how teachers think and feel about GT services. However, most teachers who are not in the endorsement program reported they have difficulty "making it work". They stated that the amount of time and additional planning required for implementation of differentiated instruction are not feasible. A phenomenon reported by all teacher focus groups was that the teachers in the endorsement program have become unofficial mentors for other teachers in the schools who are having difficulty implementing some aspects of the differentiation practices. This was true regardless of the subject the endorsement teachers taught and mostly regardless of how "experienced" the endorsement teachers were.

The classroom observations could also be used as a measure of climate in the school regarding differentiation of classroom instruction for GT students. There was a

significant difference in the amount of time spent differentiating instruction between teachers who are participating in the endorsement program and teachers who have received professional development but are not in the endorsement classes. It could be hypothesized that a significant change in climate is beginning to take place but will only be transformational when a majority of the teachers in the school receive the level of training required by the endorsement program.

Summary and Conclusions

The present results are consistent with findings of other research that economically disadvantaged students are under-identified for gifted and talented programs. However, the findings of the survey indicate that teachers who have received specific training in the identification of these hard to identify populations believe they are better able to identify these students after detailed training. The training program being used by the three schools is in the process of being developed by the lead school in the project. This school received a Jacob Javits gifted and talented grant with the specific purpose of developing a model program and identification procedure for use in a rural school district with high percentages of economically disadvantaged and under achieving students. The training on identification follows a model developed by Howard Spicker (1992) that emphasizes identification of rural gifted youth. He has developed a list of identifying characteristics for rural disadvantaged gifted children that contrasts the students with the more typical urban middle class child who displays skills and abilities that teachers automatically recognize as gifted, i.e. speaking standard English, having good verbal and written communication skills, active participation in class, high performance on standardized tests, and well-done classroom and homework

assignments. Disadvantaged rural gifted students, on the other hand, often speak in a non-standard English regional dialect, may have good content but poor quality in writing mechanics, may be passive in class and lax in completing homework assignments, and are likely to not do well on standardized tests (Spicker, 1992).

This project is in the middle stages of a three year cycle and will be used to follow changes in identification procedures and teaching practices in the participating schools. The end result should be an increase in the proportion of students in the gifted/talented program who are economically disadvantaged.

In summary, it appears that any lasting systemic change in the three middle schools regarding identification and provision of services for GT students are very much dependent on having a cadre of teachers who have more training than traditional professional development experiences. The professional development experiences seem to convince the majority of teachers that these practices are the "right" thing to do. But actual implementation seems to depend upon the sustained learning and practice that is taking place in the training program of the endorsement teachers. The degree to which other teachers in the building turn to those teachers as mentors then becomes the defining factor in how much systemic change actually takes place. Additionally, the degree of commitment of the building administrator becomes paramount in sustaining the initial effort.

References

America 2000: (1989). An education strategy. America 2000. Governor's Task Force on Education, Charlottesville, VA.

Baldwin, A.Y. (1987). I'm black, but look at me, I am also gifted. Gifted Child Quarterly, 31, 4: 180-185.

Banbury, M.M. & Wellington, B. (1989). Designing and using peer nomination forms. Gifted Child Quarterly, 33, 161-166.

Barstow, D. & Baldwin, A. (1988). Disadvantaged/minority/learning disabled. GCM's Identification Monograph. Gifted and Talented Publications: Sewell, NJ.

Biehler, D. (1992). The road not taken. Challenge, 48, 10-15.

Chapman, P.D. (1988). Schools as sorters: Lewis M. Terman, applied psychology, and the intelligence testing movement, 1890-1930. New York: University Press.

Eby, J.W. & Smutney, J.F. (1990). A thoughtful overview of gifted education. New York: Longman.

Gagne, F. (1989). Peer nominations as a psychometric instrument: Many questions asked but few answered. Gifted child Quarterly, 33, 53-57.

Gallagher, J.J. (1991). Educational reform, values, and gifted students. Gifted Child Quarterly, 35, 12-19.

Gardner, H. (1983). Frames of mind. New York: Basic Books.

Guskin, S.L., Peng, C.-Y. J., & Simon, M. (1992). Do teachers react to "multiple intelligences"? Effects of teachers' stereotypes on judgments and expectancies for students with diverse patterns of giftedness/talent. Gifted Child Quarterly, 36, 32-37.

Karnes, M.B. & Johnson, L.J. (1987). Bringing out head start talents: Findings from the field. Gifted Child Quarterly, 31, 174-179.

Kulick, J.A. (1991). Findings on grouping are often distorted: Response to Allan. Educational Leadership, 48(6), 67.

Kulick, J.A. & Kulick, C. -L.C. (1982). Effects of ability grouping on secondary school students: A meta-analysis of evaluation findings. American Educational Research Journal, 19, 415-428.

Kulick, J.A. & Kulick, C.-L.C. (1984). Effects of accelerated instruction on students. Review of Educational Research, 54, 409-425.

Kulick, J.A. & Kulick, C.-L.C. (1987). Effects of ability grouping on student achievement. Equity and Excellence, 23, 22-30.

Kulick, J.A. & Kulick, C.-L.C. (1990). Ability grouping and gifted students. In N. Colangelo & G.A. Davis (Eds.) Handbook of Gifted Education, Boston, MA: Allyn & Bacon.

Louis, B. & Lewis, M. (1992). Parental beliefs about giftedness in young children and their relation to actual ability level. Gifted Child Quarterly, 36, 27-31.

Lynch, S. & Mills, c. (1990). The skills reinforcement program (SRP): An academic program for high potential minority youth. Journal for the education of the Gifted, 13(4), 363-379.

Maker, J. (Ed.). (1989). Critical issues in gifted education: Defensible programs for the gifted (Vol. II). Rockville, MD: Aspen Publications.

Marshall, S.P. (1998). Creating conditions for developing and nurturing talent: The work of school leaders. NASSP Bulletin, 82(595), 75-84

Mills, C.J. & Durden, W.G. (1992). Cooperative learning and ability grouping: An issue of choice. Gifted Child Quarterly, 36, 11-16.

Mitchell, B.M. (1988). A strategy for the identification of the culturally different gifted/talented child. Roeper Review, 10(3), 163-165.

Olenchak, F.R. & Renzulli, J.S. (1989). The effectiveness of the school wide enrichment model on selected aspects of elementary school change. Gifted Child Quarterly, 33, 36-39.

Patton, J.M., Prillman, D., & VanTassel-Baska, J. (1990). The nature and extent of programs for the disadvantaged gifted in the United States and Territories. Gifted Child Quarterly, 34, 94-96.

Renzulli, J.S. & Purcell, J.H. (1996). Gifted education: A look around and a look ahead. Roeper Review, 18(3), 173-178.

Resnick, L. (1990). Performance-based assessment. Keynote address presented at the Office of Educational Research and Improvement Conference on Assessment, Washington, DC.

Richert, E.S., Alvino, J., & McDonnel, R. (1982). The national report on identification: Assessment and recommendations for comprehensive identification of gifted and talented youth. Sewell, NJ: Educational Improvement Center-South.

Richert, E.S. (1987). Rampant problems and promising practices in the identification of disadvantaged gifted students. Gifted Child Quarterly, 31, 149-154.

Rogers, K.B. (1998). Using current research to make "good" decisions about grouping. NASSP Bulletin, 82(595), 38-46.

Skuy, M., Gaydon, V., Hoffenberg, S., & Fridjhon, P. (1990). Predictors of

performance of disadvantaged adolescents in a gifted program. Gifted Child Quarterly, 34, 97-99.

Slavin, R. (1987a). Grouping for instruction in the elementary school. Educational Leadership, 22, 109-127.

Slavin, R. (1987b). Ability grouping and student achievement in elementary schools A best-evidence synthesis. Review of Educational Research, 57(3), 293-336.

Slavin, R. (1988a). Synthesis of research on grouping in elementary and secondary schools. Educational Leadership, 46(1), 67-77.

Slavin, R. (1988b). Cooperative learning. Theory, research, and practice. Englewood Cliffs, NJ: Prentice-Hall.

Slavin, R. (1990). Ability grouping, cooperative learning and the gifted. Journal for the Education of the Gifted, 14(1), 3-8.

Slavin, R. (1991). Are cooperative learning and "untracking" harmful to the gifted? Educational Leadership, 48(6), 68-71.

Slavin, R., Leavey, M., & Madden, N. (1984). Combining cooperative learning and individualized instruction: Effects on student mathematics achievement, attitudes, and behaviors. Elementary School Journal, 84(4), 409-422.

Smith, J., LeRose, B., & Clasen, R.E. (1991). Underrepresentation of minority students in gifted programs: Yes! It matters! Gifted Child Quarterly, 35, 81-83.

Spicker, H.H. (1992). Identifying and enriching rural gifted children. Educational Horizons, 70, 60-65.

Spicker, H.H., Southern, W.T., & Davis, B.I. (1987). The rural gifted child. Gifted Child Quarterly, 31, 155-157.

Vaughn, V.L., Feldhusen, J.F., & Asher, J.W. (1991). Meta-analysis and review of research on pull-out programs in gifted education. Gifted Child Quarterly, 35, 92-98.

Wiggins, G. (1989). A true test: Toward more authentic and equitable assessment. Phi Delta Kappan, 83, 703-713.

Winner, E. (1998). Giftedness and egalitarianism in education: A zero sum? NASSP Bulletin, 82(595), 47-60.